INDICES TO VOLUME 38: 1990

AUTHOR INDEX

A

Adams, Warren P., and Hanif D. Sherali, *Linearization Strategies for a Class of Zero–One Mixed Integer Programming Problems,* 217–226

Anderson, Edward J., *Testing Feasibility in a Lot Scheduling Problem,* 1079–1088

Assad, Arjang A., *see* **Kelly et al.,** 760–772

Assaf, David, and J. George Shanthikumar, *Optimal Spares Provisioning When Component Price Is Changing,* 319–329

Axsäter, Sven, *Simple Solution Procedures for a Class of Two-Echelon Inventory Problems,* 64–69

B

Baker, Edward K., *see* **Kelly et al.** 760–772

Baker, Kenneth R., and Gary D. Scudder, *Sequencing With Earliness and Tardiness Penalties: A Review,* 22–38

Bard, Jonathan F., *see* **Moore and Bard,** 911–921

Bartholdi, John J., III, and Kevin L. McCroan, *Scheduling Interviews for a Job Fair* (OR Practice), 951–960

Batta, Rajan, *see* **Gopalan et al.,** 961–972

Ben-Ayed, Omar, and Charles E. Blair, *Computational Difficulties of Bilevel Linear Programming* (Technical Note), 556–559

Ben-Horim, Moshe, and Dror Zuckerman, *Simulating Job Search Through the Unemployment Insurance System* (Technical Note), 359–361

Ben-Israel, Adi, *see* **Flam and Ben-Israel,** 1045–1051

Benjamin, A. T., *Graphs, Maneuvers and Turnpikes,* 202–216

Berg, M., and M. J. Posner, *Customer Delay in $M/G/\infty$ Repair Systems With Spares,* 344–348

Berman, O., D. Einav and G. Handler, *The Constrained Bottleneck Problem in Networks* (Technical Note), 178–181

Bertsimas, Dimitris, *An Analytic Approach to a General Class of G/G/s Queueing Systems,* 139–155

Bertsimas, Dimitris, J., Patrick Jaillet and Amedeo R. Odoni, *A Priori Optimization,* 1019–1033

Blair, Charles E., *see* **Ben-Ayed and Blair** (Technical Note), 556–559

Bordley, Robert F., *Measuring Risk Reduction Benefits With Discounted Longevity,* 815–819

Bodin, Lawrence D., *Twenty Years of Routing and Scheduling* (OR Forum), 571–579

Brandeau, Margaret L., and Samuel S. Chiu, *A Unified Family of Single-Server Queueing Location Models,* 1034–1044

Brown, Gerald G., Clarke E. Goodman and R. Kevin Wood, *Annual Scheduling of Atlantic Fleet Naval Combatants,* 249–259

Browne, Sid, and Uri Yechiali, *Scheduling Deteriorating Jobs on a Single Processor,* 495–498

C

Campbell, Brian A., *see* **Martin, Rardin and Campbell,** 127–138

Carolan, William, J., James H. Hill, Jeffery L. Kennington, Sandra Niemi and Stephen J. Wichmann, *An Empirical Evaluation of the KORBX® Algorithms for Military Airlift Applications,* 240–248

Chand, Suresh, and Suresh P. Sethi, *A Dynamic Lot Sizing Model With Learning in Setups,* 644–655

Chand, Suresh, Suresh P. Sethi and Jean-Marie Proth, *Existence of Forecast Horizons in Undiscounted Discrete-Time Lot Size Models,* 884–892

Chao, Hung-Po and Robert Wilson, *Optimal Contract Period for Priority Service,* 598–606

Chiu, Samuel S., *see* **Brandeau and Chiu,** 1034–1044

Chow, Tat-Chi, Robert M. Oliver and G. Anthony Vignaux, *A Bayesian Escalation Model to Predict Nuclear Incidents and Risks,* 265–277

Corea, G. A., and V. G. Kulkarni, *Minimum Cost Routing on Stochastic Networks,* 527–536

D

Dada, Maqbool, and K. N. Srikanth, *Monopolistic Pricing and the Learning Curve: An Algorithmic Approach,* 656–666

Daduna, Hans, *Exchangeable Items in Repair Systems: Delay Times,* 349–354

Dallery, Yves, and Kathryn E. Stecke, *On the Optimal Allocation of Servers and Workloads in Closed Queueing Networks,* 694–703

Daskin, Mark, Philip C. Jones and Timothy J. Lowe, *Rationalizing Tool Selection in a Flexible Manufacturing System for Sheet-Metal Products,* 1104–1115

Devroye, Luc, *Coupled Samples in Simulation,* 114–126

Dyer, James S., Richard N. Lund, John B. Larsen, V. Kumar and Robert P. Leone, *A Decision Support System for Prioritizing Oil and Gas Exploration Activities* (OR Practice), 386–396

E

Eagle, James N., and James R. Yee, *An Optimal Branch-and-Bound Procedure for the Constrained Path, Moving Target Search Problem,* 110–114
Einav, D., *see* Berman, Einav and Handler (Technical Note), 178–181
Erlenkotter, Donald, *Ford Whitman Harris and the Economic Order Quantity Model* (OR Forum), 937–950
Ewacha, Kevin, Ivan Rival and George Steiner, *Permutation Schedules for Flow Shops With Precedence Constraints* (Technical Note), 1135–1139

F

Farley, A. A., *A Note on Bounding a Class of Linear Programming Problems, Including Cutting Stock Problems* (Technical Note), 922–923
Federgruen, Awi, and Kut C. So, *Optimal Maintenance Policies for Single-Server Queueing Systems Subject to Breakdowns,* 330–343
Ferland, Jacques A., and Gilles Guénette, *Decision Support System for the School Districting Problem* (OR Practice), 15–21
Fishman, George S., *How Errors in Component Reliability Affect System Reliability* (Technical Note), 728–732
Flåm, Sjur D., and Adi Ben-Israel, *A Continuous Approach to Oligopolistic Market Equilibrium,* 1045–1051
Flynn, James, and Stanley Garstka, *A Dynamic Inventory Model With Periodic Auditing,* 1089–1103
Ford, Andrew, *Estimating the Impact of Efficiency Standards on the Uncertainty of the Northwest Electric System* (OR Practice), 580–597

G

Garfinkel, R. S., and W. J. Plotnicki, *Fixed Cycle Scheduling: A Solvable Problem With Empty Precedence Structure,* 629–633
Garstka, Stanley, *see* Flynn and Garstka, 1089–1103
Gavish, Bezalel, and Robert E. Johnson, *A Fully Polynomial Approximation Scheme for Single-Product Scheduling in a Finite Capacity Facility,* 70–83
Georgiou, A. C., *see* Vassiliou and Georgiou, 537–545
Gerchak, Yigal, *see* Henig and Gerchak, 634–643
Girard, A., *see* Mason, Girard and Gu, 412–425
Glynn, Peter W., and Philip Heidelberger, *Bias Properties of Budget Constrained Simulations,* 801–814
Golden, Bruce L., *see* Kelly et al., 760–772
Goldfarb, Donald, Jianxiu Hao and Sheng-Roan Kai, *Efficient Shortest Path Simplex Algorithms,* 624–628
Goodman, Clarke E., *see* Brown, Goodman and Wood, 249–259
Gopalan, Ram, Krishna S. Kolluri, Rajan Batta and Mark H. Karwan, *Modeling Equity of Risk in the Transportation of Hazardous Materials,* 961–973
Gordon, J. J., *The Evaluation of Normalizing Constants in Closed Queueing Networks,* 863–870
Green, Linda, and Benjamin Melamed, *An Anti-PASTA Result for Markovian Systems* (Technical Note), 173–175
Gu, X. D., *see* Mason, Girard and Gu, 412–425
Guénette, Gilles, *see* Ferland and Guénette (OR Practice), 15–21

H

Hackman, Steven T., and Loren K. Platzman, *Near-Optimal Solution of Generalized Resource Allocation Problems With Large Capacities,* 902–910
Hallefjord, Åsa and Sverre Storøy, *Aggregation and Disaggregation in Integer Programming Problems,* 619–623
Hamblin, Daniel M., Jeannie C. Johnson and Judith Killen, *Optimizing Simulation for Policy Analysis in a Residential Energy End-Use Model,* 397–411
Handler, G., *see* Berman, Einav and Handler (Technical Note), 178–181
Hao, Jianxiu, *see* Goldfarb, Hao and Kai, 624–628
Harel, Arie, *Convexity Properties of the Erlang Loss Formula,* 499–505
Harris, Ford W., *How Many Parts to Make at Once* (OR Forum), 937–950
Harrison, J. Michael, and Lawrence M. Wein, *Scheduling Networks of Queues: Heavy Traffic Analysis of a Two-Station Closed Network,* 1052–1064
Haurie, A., G. Savard and D. J. White, *A Note On: An Efficient Point Algorithm for a Linear Two-Stage Optimization Problem* (Technical Note), 553–555
Heidelberger, Philip, *see* Glynn and Heidelberger, 801–814
Henig, Mordechai I., *Risk Criteria in a Stochastic Knapsack Problem,* 820–825
Henig, Mordechai and Yigal Gerchak, *The Structure of Periodic Review Policies in the Presence of Random Yield,* 634–643
Herrbach, Lee A., and Joseph T.-T. Leung, *Preemptive Scheduling of Equal Length Jobs on Two Machines to Minimize Mean Flow Time,* 487–494

Heyman, Daniel P., *Another Way to Solve Chemical Equilibria* (Technical Note), 355–358
Hill, James E., *see* **Carolan et al.,** 240–248
Hodgson, Thom J., *see* **Yamani, Hodgson and Martin-Vega,** 792–800

I

Ikem, Fidelis M., and Arnold M. Reisman, *An Approach to Planning for Physician Requirements in Developing Countries Using Dynamic Programming,* 607–618

J

Jaillet, Patrick, *see* **Bertsimas, Jaillet and Odoni,** 1019–1033
Johnson, Jeannie C., *see* **Hamblin, Johnson and Killen,** 397–411
Johnson, Robert E., *see* **Gavish and Johnson,** 70–83
Joneja, Dev, *The Joint Replenishment Problem: New Heuristics and Worst Case Performance Bounds,* 711–723
Jones, Philip C., *see* **Daskin, Jones and Lowe,** 1104–1115

K

Kai, Sheng-Roan, *see* **Goldfarb, Hao and Kai,** 624–628
Kananen, Ilkka, Pekka Korhonen, Jyrki Wallenius and Hannele Wallenius, *Multiple Objective Analysis of Input-Output Models for Emergency Management* (OR Practice), 193–201
Kang, Keebom, and Bruce Schmeiser, *Graphical Methods for Evaluating and Comparing Confidence-Interval Procedures* (Technical Note), 546–552
Karwan, Mark, H., *see* **Gopalan et al.,** 961–973
Kella, Offer, *Optimal Control of the Vacation Scheme in an M/G/1 Queue* (Technical Note), 724–728
Kelly, James P., Bruce L. Golden, Arjang A. Assad and Edward K. Baker, *Controlled Rounding of Tabular Data,* 760–772
Kennington, Jeffery L., *see* **Carolan et al.,** 240–248
Kijima, Masaaki, Naoki Makimoto and Hiroshi Shirakawa, *Stochastic Minimization of the Makespan in Flow Shops With Identical Machines and Buffers of Arbitrary Size* (Technical Note), 924–928
Killen, Judith, *see* **Hamblin, Johnson and Killen,** 397–411
Kincaid, R. K., D. M. Nicol, D. R. Shier and D. Richards, *A Multistage Linear Array Assignment Problem,* 993–1005
Kirkwood, Craig W., *Does Operations Research Address Strategy?* (OR Forum) 747–751
Klincewicz, John G., *Solving A Freight Transport Problem Using Facility Location Techniques,* 99–109
Knessl, Charles, *Refinements to Heavy Traffic Limit Theorems in Queueing Theory,* 826–837
Knessl, C., B. J. Matkowski, Z. Schuss and C. Tier, *An Analytical Approach to the M/G/2 Queue,* 506–518
Kolluri, Krishna, *see* **Gopalan et al.,** 961–973
Korhonen, Pekka, *see* **Kananen et al.** (OR Practice), 193–201
Kulkarni, V. G., *see* **Corea and Kulkarni,** 527–536
Kumar, V., *see* **Dyer et al.** (OR Practice), 386–396

L

Lamar, Bruce W., Yosef Sheffi and Warren B. Powell, *A Capacity Improvement Lower Bound for Fixed Charge Network Design Problems,* 704–710
Larsen, John B., *see* **Dyer et al.** (OR Practice), 386–396
Lee, Hyo-Soong, and Stephen M. Pollock, *Approximate Analysis of Open Acyclic Exponential Queueing Networks With Blocking,* 1123–1134
Leone, Robert, P., *see* **Dyer et al.** (OR Practice), 386–396
Leung, Joseph T.-T., *see* **Herrbach and Leung,** 487–494
Lev, Benjamin, and Howard J. Weiss, *Inventory Models With Cost Changes,* 53–63
Liu, John J., *Optimal Dispatching in a Periodic Review Cellular Manufacturing System,* 893–901
Lowe, Timothy J., *see* **Daskin, Jones and Lowe,** 1104–1115
Lund, Richard N., *see* **Dyer et al.** (OR Practice), 386–396

M

Magnanti, T. L., and R. Vachani, *A Strong Cutting Plane Algorithm for Production Scheduling With Changeover Costs,* 456–473
Makimoto, Naoki, *see* **Kijima, Makimoto and Shirakawa** (Technical Note), 924–928
Martin-Vega, Louis A., *see* **Yamani, Hodgson, and Martin-Vega,** 792–800
Martin, R. Kipp, Ronald L. Rardin and Brian A. Campbell, *Polyhedral Characterization of Discrete Dynamic Programming,* 127–138
Mason, L. G., A. Girard and X. D. Gu, *Multilocation Facility Modernization: Models and Heuristics,* 412–425
Matkowski, B. J., *see* **Knessl et al.,** 506–518
McCroan, Kevin L., *see* **Bartholdi and McCroan** (OR Practice), 951–960
Melamed, Benjamin, and Ward Whitt, *On Arrivals That See Time Averages,* 156–172
Melamed, Benjamin, *see* **Green and Melamed** (Technical Note), 173–175

Mendelson, Haim, and Seungjin Whang, *Optimal Incentive-Compatible Priority Pricing for the M/M/1 Queue,* 870–883
Moore, James T., and Jonathan F. Bard, *The Mixed Integer Bilevel Programming Problem,* 911–921

N

Nawijn, Wim M., *Look-Ahead Policies for Admission to a Single Server Loss System,* 854–862
Nelson, Barry L., *Control Variate Remedies,* 974–992
Nelson, Randolph D., *Heavy Traffic Response Times for a Priority Queue With Linear Priorities* (Technical Note), 560–563
Nicol, D. M., *see* **Kincaid et al.,** 993–1005
Niemi, S., *see* **Carolan et al.,** 240–248

O

O'Cinneide, Colm, *see* **Schneider, Tang and O'Cinneide,** 1116–1122
O'Cinneide, Colm Art, *On the Limitations of Multivariate Phase-Type Families,* 519–526
Odoni, Amedeo R., *see* **Bertsimas, Jaillet and Odoni,** 1019–1033
Oliver, Robert M., *see* **Chow, Oliver and Vignaux,** 265–277

P

Papadakis, Nikoforos A., and Anastassios N. Perakis, *Deterministic Minimal Time Vessel Routing,* 426–438
Perakis, Anastassios N., *see* **Papadakis and Perakis,** 426–438
Platzman, Loren K., *see* **Hackman and Platzman,** 902–910
Plotnicki, W. J., *see* **Garfinkel and Plotnicki,** 629–633
Pollock, Stephen M., *see* **Lee and Pollock,** 1123–1134
Posner, M. J. M., *see* **Berg and Posner,** 344–348
Powell, Warren B., *see* **Lamar, Sheffi and Powell,** 704–710
Proth, Jean-Marie, *see* **Chand, Sethi and Proth,** 884–892

R

Rao, M. R., *see* **Sethi et al.,** 84–98
Rardin, Ronald L., *see* **Martin, Rardin and Campbell,** 127–138
Ravid, Itzhak, *Military Decision Game Theory and Intelligence: An Anecdote,* 260–264
Reisman, Arnold M., *see* **Ikem and Reisman,** 607–618
Reyniers, Diane, *A High-Low Search Algorithm for a Newsboy Problem With Delayed Information Feedback,* 838–846
Richards, D., *see* **Kincaid et al.,** 993–1005
Rival, Ivan, *see* **Ewacha, Rival and Steiner** (Technical Note), 1135–1139
Rosenblatt, Meir J., and Uriel G. Rothblum, *On the Single Resource Capacity Problem for Multi-Item Inventory Systems,* 686–693
Rothblum, Uriel G., *see* **Rosenblatt and Rothblum,** 686–693
Roundy, Robin O., *Computing Nested Reorder Intervals for Multi-Item Distribution Systems,* 37–52

S

Sandbothe, Richard A., and Gerald L. Thompson, *A Forward Algorithm for the Capacitated Lot Size Model With Stockouts,* 474–486
Savard, G., *see* **Haurie, Savard and White** (Technical Note), 553–555
Scarf, Herbert E., *Mathematical Programming and Economic Theory* (OR Forum), 377–385
Schmeiser, Bruce, *see* **Kang and Schmeiser** (Technical Note), 546–552
Schneider, Helmut, Kwei Tang and Colm O'Cinneide, *Optimal Control of a Production Process Subject to Random Deterioration,* 1116–1122
Schneider, Michael H., and Stavros A. Zenios, *A Comparative Study of Algorithms for Matrix Balancing,* 439–455
Schuss, Z., *see* **Knessl et al.,** 506–518
Scudder, Gary D., *see* **Baker and Scudder,** 22–38
Sengupta, Bhaskar, *A Queue With Service Interruptions in an Alternating Random Environment,* 308–318
Sethi, Suresh P., *see* **Chand and Sethi,** 644–655
Sethi, Suresh P., *see* **Chand, Sethi and Proth,** 884–892
Sethi, S. P., C. Sriskandarajah, Giri Kumar Tayi and M. R. Rao, *Heuristic Methods for Selection and Ordering of Part-Orienting Devices,* 84–98
Shanthikumar, J. George, *see* **Assaf and Shanthikumar,** 319–329
Sheffi, Yosef, *see* **Lamar, Sheffi and Powell,** 704–710
Sherali, Hanif D., *see* **Adams and Sherali,** 217–226
Sherali, Hanif D., and Konstantin Staschus, *A Two-Phase Decomposition Approach for Electric Utility Capacity Expansion Planning Including Nondispatchable Technologies,* 773–791
Shier, D. R., *see* **Kincaid et al.,** 993–1005
Shirakawa, Hiroshi, *see* **Kijima, Makimoto and Shirakawa** (Technical Note), 924–928
Simon, Herbert A., *Prediction and Prescription in Systems Modeling* (OR Forum), 7–14

So, Kut C., *see* **Federgruen and So**, 330–343
Sobel, Matthew J., *Myopic Solutions of Affine Dynamic Models*, 847–853
Soofi, Ehsan S., *Generalized Entropy-Based Weights for Multiattribute Value Models* (Technical Note), 362–363
Srikanth, K. N., *see* **Dada and Srikanth**, 656–666
Sriskandarajah, C., *see* **Sethi et al.** 84–98
Staschus, Konstantin, *see* **Sherali and Staschus**, 773–791
Stecke, Kathryn E., *see* **Dallery and Stecke**, 694–703
Steiner, George, *see* **Ewacha, Rival and Steiner** (Technical Note), 1135–1139
Storøy, Sverre, *see* **Hallefjord and Storøy**, 619–623

T

Takagi, Hideaki, *Priority Queues With Setup Times*, 667–677
Tang, Kwei, *see* **Schneider, Tang and O'Cinneide**, 000–T15
Tayi, Giri Kumar, *see* **Sethi et al.**, 84–98
Thompson, Gerald L., *see* **Sandbothe and Thompson**, 474–486
Tier, C., *see* **Knessl et al.**, 506–518
Todd, Michael J., *A Dantzig-Wolfe-Like Variant of Karmarkar's Interior-Point Linear Programming Algorithm*, 1006–1018

V

Vachani, R., *see* **Magnanti and Vachani**, 456–473
Van Ommeren, J. C. W., *Simple Approximation for the Batch-Arrival $M^x/G/1$ Queue*, 678–685
Vassiliou, P.-C. G., and A. C. Georgiou, *Asymptotically Attainable Structures in Nonhomogeneous Markov Systems*, 537–545
Vignaux, G. Anthony, *see* **Chow, Oliver and Vignaux**, 265–277

W

Wallenius, Hannele, *see* **Kananen et al.** (OR Practice), 193–201
Wallenius, Jyrki, *see* **Kananen et al.** (OR Practice), 193–201
Waks, Norman, *OR/MS Support to Senior Managers in the Public Sector: Two Cases* (OR Forum), 189–192
Weiss, Howard J., *see* **Lev and Weiss**, 53–63
Wein, Lawrence M., *see* **Harrison and Wein**, 1052–1064
Wein, Lawrence M., *Scheduling Networks of Queues: Heavy Traffic Analysis of a Two-Station Network With Controllable Inputs*, 1065–1078
Whang, Seungjin, *see* **Mendelson and Whang**, 870–883
White, D. J., *see* **Haurie, Savard and White** (Technical Note), 553–555
Whitt, Ward, *see* **Melamed and Whitt**, 156–172
Wichmann, Stephen J., *see* **Carolan et al.**, 240–248
Wilson, Robert, *see* **Chao and Wilson**, 598–606
Wolff, Ronald W., *A Note on PASTA and Anti-PASTA for Continuous-Time Markov Chains* (Technical Note), 176–177
Wood, R. Kevin, *see* **Brown, Goodman and Wood**, 249–259

Y

Yamani, Abdulrahman, Thom J. Hodgson and Louis A. Martin-Vega, *Single Aircraft Mid-Air Refueling Using Spherical Distances*, 792–800
Yechiali, Uri, *see* **Browne and Yechiali**, 495–498
Yee, James R., *see* **Eagle and Yee**, 110–114

Z

Zazanis, Michael A., *Infinitesimal Perturbation Analysis Estimates for Moments of the System Time of an $M/M/1$ Queue* (Technical Note), 364–369
Zenios, Stavros A., *see* **Schneider and Zenios**, 439–455
Zheng, Yu-Sheng, and Paul Zipkin, *A Queueing Model to Analyze the Value of Centralized Inventory Information*, 269–307
Zipkin, Paul, *see* **Zheng and Zipkin**, 269–307
Zoraster, Steven, *The Solution of Large 0–1 Integer Programming Problems Encountered in Automated Cartography* (OR Practice), 752–759
Zuckerman, Dror, *see* **Ben-Horim and Zuckerman** (Technical Note), 359–361

SUBJECT INDEX

The subject index conforms to the categories established in The OR/MS Index, 1952–1976, 1976–1981 and 1982–1987. The 1952–1976 cumulative index was compiled by Kneale T. Marshall and F. Russell Richards, the 1976–1981 cumulative index was compiled by Jon W. Tolle and Richard E. Stone, and the 1982–1987 cumulative index was compiled by Jon W. Tolle. The indices were published in 1978, 1983 and 1988 by the Institute of Management Sciences and the Operations Research Society of America.

A

Algorithms, multiple criteria
Berman, O., algorithms for multiple criteria problems on networks, 178–180
Analysis of algorithms, computational complexity
Anderson, E. J., NP-hardness of a lot scheduling problem, 1079–1088
Ben-Ayed, O., bilevel linear programming is NP-hard, 556–560

C

Communications
Sengupta, B., communication theory, 308–318
Computers
Kincaid, R. K., parallel algorithms and workload balancing, 993–1005
Sengupta, B., computers, 308–318
Cost analysis
Bordley, R. F., cost/benefit analysis, 815–819

D

Decision analysis
Bordley, R. F., risk, 815–819
Dyer, J. S., applications in petroleum/natural gas, 386–396
Kananen, I., multiple criteria, 193–201
Decision analysis, applications
Chao, H. P., optimal contract period, 598–606
Decision analysis, risk
Chow, T.-C., influence diagrams for safety analysis, 265–277
Decision analysis, sequential
Reyniers, D., supply quantities, 838–846
Decision support system
Ferland, J. A., school districting problem, 15–21
Dynamic programming
Federgruen, A., semi-Markov, 330–343
Henig, M. I., periodic review with random yield, 634–643
Henig, M. I., risk criteria, 820–825
Ikem, F. M., capacity planning for training of physicians, 607–618
Papadakis, N. A., optimal control, 426–438
Sobel, M. J., myopic solution of affine dynamic models, 847–853
Dynamic programming, applications
Chao, H. P., optimal contract period, 598–606
Flynn, J., dynamic programming model, 1089–1103
Dynamic programming, deterministic
Chand, S., dynamic lot size model, 884–892
Sandbothe, R. A., forward algorithms for the capacitated lot size model, 474–486
Dynamic programming, optimal control
Liu, J. J., Markovian decision models, 893–901
Dynamic programming, semi-Markov
Nawijn, W. M., admission control to a loss system, 854–862

E

Economics
Hamblin, D. M., building standard policy impacts on the new house market, 397–411
Kananen, I., input-output analysis, 193–201
Economics, input-output analysis
Schneider, M. H., estimating social accounting matrices, 439–455
Education systems, planning
Ferland, J. A., school districting, 15–21
Environment
Gopalan, R., transportation of hazardous materials, 961–973

F

Facilities/equipment planning
Brandeau, M. L., facility location, 1034–1044
Sherali, H. D., capacity expansion, 773–791
Facilities/equipment planning, design
Daskin, M., tooling, 1104–1115
Facilities/equipment planning, location
Klincewicz, J. G., concave-cost facility location problem, 99–109
Facilities/equipment planning, maintenance/replacement
Mason, L. G., multilocation facility modernization, 412–425
Forecasting
Chow, T.-C., Bayesian prediction and inference, 265–277
Hamblin, D. M., residential energy use by appliance and fuel, 397–411

Games/group decisions
Moore, J. T., noncooperative, 911–921
Ravid, I., game theory, 260–264
Sobel, M. J., noncooperative sequential games, 847–853
Games/group decisions, bargaining
Ben-Horim, M., Stackelberg solution concept, 359–361
Games/group decision, noncooperative
Ben-Ayed, O., algorithms for solving Stackelberg games, 556–560
Flåm, S. D., equilibria in Cournot oligopolies, 1045–1051
Government
Waks, N., support to senior managers, 189–192
Government, energy policy
Ford, A., the impact of efficiency standards, 580–597
Government, programs
Ben-Horim, M., unemployment insurance system, 359–361
Government, services
Ikem, F. M., manpower planning in developing countries, 607–618

I

Industries, electric
Chao, H. P., priority service of electric power, 598–606
Information systems
Bartholdi, J. J., analysis and design, 951–960
Information systems, management
Mendelson, H., transfer pricing for computer services, 870–853
Inventory/production
Berg, M., spares provisioning, 344–348
Chand, S., dynamic extension with constant initial demand, 884–892
Dallery, Y., flexible manufacturing, 694–703
Daskin, M., applications, 1104–1115
Erlenkotter, D., EOQ model, 937–950
Henig, M., periodic review with random yield, 634–643
Joneja, D., joint replenishment problem,711–723
Lev, B., ordering strategies for price increases, 53–63
Magnanti, T. L., production planning with product changeover, 456–473
Inventory/production, multi-term
Rosenblatt, M. J., single resource capacity problem in inventory systems, 686–693
Inventory/production, multi-item/echelon/stage
Axsäter, S., one-for-one replenishment, 64–69
Robinson, L. W., multilocation models with lateral transshipments, 278–295
Inventory/production, planning horizons
Chand, S., dynamic lot size model, 644–655
Chand, S., existence of forecast horizons, rolling horizon procedures, 884–892
Sandbothe, R. A., horizon techniques for the capacitated lot size model, 474–486
Inventory/production, policies
Dada, M., marketing and pricing, 656–666
Inventory/production, policies, maintenance/replacement
Browne, S., scheduling deteriorating jobs, 495–498
Inventory/production, policies, review
Flynn, J., periodic auditing and inspection, 1089–1103
Inventory/production, stochastic
Axsäter, S., Poisson demand, continuous review, 64–69
Inventory/production, uncertainty
Reyniers, D., minmax analysis, 838–846
Inventory/production, uncertainty, stochastic
Flynn, J., stochastic inventory model, 1089–1103
Zheng, Y.-S., centralized inventory information, 296–307

L

Labor
Ben-Horim, M., labor market and job search, 359–361

M

Maintenance/replacement
Assaf, D., keeping a system operating by replacing failing components, 319–329
Manufacturing
Daskin, M., automated systems, 1104–1115
Marketing
Dada, M., pricing, 656–666
Sobel, M. J., dynamic oligopoly with advertising decisions, 847–853
Mathematics, systems solutions
Heyman, D. P., nonlinear programming for solving simultaneous equations, 355–358
Military
Brown, G. G., force readiness, 249–259
Ravid, I., military history, 260–264
Waks, N., management of large projects, 182–192
Yamani, A., logistics, 792–800
Military, logistics
Benjamin, A. T., optimal maneuvering, 202–216
Military, search/surveillance
Eagle, J. N., moving target and continuous search path, 110–114

N

Natural resources
Sherali, H. D., nondispatchable/renewable sources of energy, 773–791
Networks/graphs
Benjamin, A. T., optimal maneuvering by graph theory approach, 202–216
Bertsimas, D. J., stochastic heuristics, traveling salesman, 1019–1033
Berman, O., multiple networks, 178–181
Brandeau, M. L., theory, 1034–1044
Gopalan, R., application, 961–973
Networks/graphs, applications
Kincaid, R. K., multiobjective optimization, 993–1005
Schneider, M. H., network models in economics, statistics and urban planning, 439–455
Networks/graphs, distance algorithms
Goldfarb, D., shortest path algorithms, 624–628
Lamar, B. W., network design problems, 704–710
Networks/graphs, flow algorithms
Sandbothe, R. A., flows in concave cost networks, 474–486
Networks/graphs, matchings
Bartholdi, J. J., edge-coloring, 951–960
Networks/graphs, multicommodity
Klincewicz, John J., concave-cost multicommodity flow problem, 99–109
Networks/graphs, stochastic
Corea, G. A., minimum cost routing, 527–536
Fishman, G. S., networks, 728–732
Henig, M. I., shortest path, 820–925

O

Organizational studies, information
Mendelson, H., systems design under asymmetric information, 870–883
Organizational studies, manpower planning
Vassiliou, P. C. G., asymptotic control of population systems, 537–545

P

Planning, government
Ikem, F. M., physician planning requirements in developing countries, 607–618
Philosophy of modeling
Simon, H. A., modeling complex systems, 7–14
Probability
Bertsimas, D. J., stochastic model application, 1019–1033
Devroye, L., Kolmogorov entropy, 114–121
Glynn, P. W., regenerative and renewal processes, 801–814
Probability, distributions
Melamed, B., stationary and Palm distributions, 156–172
O'Cinneide, C. A., phase type distributions, 519–526
Prékopa, A., bounds on distributions, 227–239
Probability, entropy
Soofi, E. S., procedure for allocation of weights, 362–363
Probability, Markov processes
Corea, G. A., first passage times as routing costs, 527–536
O'Cinneide, C. A., joint distribution of hitting times, 519–526
Vassiliou, P. C. G., nonhomogeneous Markov systems, 537–545
Wolff, R., properties of the Poisson process, 176–177
Probability, renewal processes
Browne, S., modeling probabilistic determination, 495–498
Probability, stochastic model applications
Chow, T.-C., application to prediction of nuclear incidents, 265–277
Green, L., point processes, 173–175
Production/scheduling
Baker, K. R., deterministic sequencing, 22–36
Browne, S., scheduling deteriorating jobs, 495–498
Dada, M., learning, 656–666
Ewacha, K., flow shops with precedence constraints, 1135–1139
Garfinkel, R. S., fixed cycle with empty precedence structure, 629–633
Gavish, B., lot sizing approximations and production planning, 70–83
Harrison, J. M., priority sequencing in a stochastic job shop, 1052–1064
Herrbach, L. A., deterministic job shop scheduling, 487–494
Joneja, D., heuristics and performance bounds, 711–723
Kijima, M., minimization of the makespan, 924–928
Liu, J. J., dispatching in flexible manufacturing systems, 893–901
Magnanti, T. L., integer programming for product changeover, 465–473
Roundy, R. O., heuristics, multi-item multistage, deterministic approximations, 37–52
Sethi, S. P., scheduling heuristics for part-orienting systems, 84–98
Wein, L. M., sequencing in a stochastic job shop, 1065–1078
Production/scheduling, applications
Bartholdi, J. J., timetabling, 951–960
Production/scheduling, cutting stock
Farley, A. A., cutting stock problems, 922–923
Production/scheduling, heuristic
Anderson, E. J., economic lot scheduling problem, 1079–1088

Production/scheduling, learning
Chand, S., setups, 644–655
Reyniers, D., demand uncertainty, 838–846
Production/scheduling, line balancing
Herrbach, L. A., mean weighted flow time, 487–494
Professional
Erlenkotter, D., history of OR/MS; obituaries, 937–950
Ravid, I., OR implementation, 260–264
Simon, H. A., OR/MS philosophy, 7–14
Professional, OR/MS philosophy
Kirkwood, C. W., role of operations research in strategy analysis, 747–751
Programming
Adams, W. P., linear reformulation of nonlinear integer programs, 217–226
Brown, G. G., generalized set partitioning, 249–259
Carolan, W. J., evaluating algorithms for military airlifts, 240–248
Hackman, S. T., nonlinear algorithms, 902–910
Hamblin, D. M., Everett's method variant with conserved energy shadow price, 397–411
Martin, R. K., dynamic programming and polyhedral theory; cutting planes, 127–138
Todd, M. J., Dantzig-Wolfe decomposition; interior-point method and simplex pivot rule, 1006–1018
Yamani, A., nonlinear algorithm, 792–800
Programming, integer
Hallefjord, Å., integer algorithms, 619–623
Programming, integer, algorithms
Kelly, J. P., LP guided research 760–772
Magnanti, T. L., facets for production planning, 465–473
Programming, integer, algorithms, branch-and-bound
Eagle, J. N., computing optimal search path, 110–114
Programming, integer, applications
Goldfarb, D., simplex algorithms for shortest path problems, 624–628
Kelly, J. P., controlled rounding, 760–772
Programming, integer, heuristic
Zoraster, S., automated cartography, 752–759
Programming, integer, nonlinear
Adams, W. P., mixed integer programming problems, 217–226
Programming, integer, theory
Lamar, B. W., lower bound for fixed charged problems, 704–710
Programming, linear, algorithms
Prékopa, A., application of dual methods, 227–239
Todd, M. J., Dantzig-Wolfe decomposition; interior-point method and simplex pivot rule, 1006–1018.
Programming, linear, theory
Farley, A. A., bounding linear programming solutions, 922–923
Programming, mathematical
Scarf, H. E., the relationship between algorithms and economic institutions, 377–385
Programming, multiple criteria
Bey-Ayed, O., bilevel linear programming, 556–560
Programming, nonlinear
Carolan, W. J., linear programming, 240–248
Flåm, S. D., algorithm for computing equilibria with nonsmooth data, 1045–1051
Programming, nonlinear, applications
Heyman, D. P., solving simultaneous equations, 355–358
Schneider, M. H., scaling and nonlinear optimization for matrix balancing, 439–455
Programming, stochastic
Kijima, M., minimization of the makespan in flow shops, 924–928

Q

Queues
Berg, M., customer delays in repair systems, 344–348
Bertsimas, D., multichannel, Markovian queues, 139–155
Dallery, Y., closed queueing networks, 694–703
Harel, A., loss system and design of queues, 499–505
Harrison, J. M., Brownian models of network scheduling problems, 1052–1064
Kella, O., vacation models, 724–728
Knessl, C., length distribution in M/G/2, 506–518
Sengupta, B., manufacturing priority, 308–318
Wein, L. M., models of network scheduling problems, 1065–1078
Wolff, R. W., relations between time and arrival averages, 176–177
Queues, applications
Lee, H.-S., analysis of networks with blocking,
Queues, approximations
Van Ommeren, J. C. W., approximations based on asymptotic analysis, 678–685
Queues, batch/bulk
Ommeren, J. C. W., approximations, 678–685
Queues, diffusion models
Knessl, C., refining diffusion approximations, 826–837
Queues, limit theorems
Melamed, B., on arrivals that see time averages, 156–172
Nelson, R. D., heavy traffic response times, 560–564
Lee, H.-S., approximation method for networks with blocking, 1123–1134

Queues, multichannel
Kella, O., optimization, 724–728
Schneider, H., optimization of process adjustment model, 1116–1122
Queues, networks
Daduna, H., exchangeable customers, 349–354
Gordon, J. J., calculation of normalizing constants, 863–869
Green, L., customer and time averages, 173–175
Melamed, B., the Arrival Theorem, 156–172
Queues, nonstationary
Zheng, Y.-S., longest-queue priority discipline, 296–307
Queues, optimization
Federgruen, A., optimal maintenance; monotone policies, 330–343
Nawijn, W. M., input control to a single server loss system, 854–862
Queues, priority
Mendelson, H., priority pricing of service operations, 870–883
Nelson, R. D., linear priority times, 560–564
Takagi, H., priority queues with setup times, 667–677

R

Reliability
Fishman, G. S., reliability, 728–732
Reliability, coherent structures
O'Cinneide, C. A., joint distribution of failure times, 519–526
Reliability, failure models
Schneider, H., inspection of production process, 1116–1122
Reliability, maintenance/repairs
Daduna, H., repair time distribution, 349–354
Federgruen, A., queueing systems subject to breakdowns, 330–343
Reliability, multistate systems
Prékopa, A., R out of N probability, 227–239
Reliability, quality control
Schneider, H., process control 1116–1122,

S

Simulation
Fishman, G. S., reliability, 728–732
Glynn, P. W., statistic analysis, 801–814
Simulation, efficiency
Nelson, B. L., variance reduction, 974–992
Simulation, random variable generation
Devroye, L., generating dependent samples, 114–126
Simulation, statistical analysis
Ford, A., estimating tolerance intervals, 580–597
Kang, K., graphical methods, 546–555
Nelson, B. L., point and interval estimation, 974–992
Simulation, system, dynamics
Ford, A., a model of the northwest electric system, 580–597
Spares
Assaf, D., optimal number of spares to be purchased, 319–329
Statistics
Soofi, E. S., minimum discrimination information approach, 362–363
Statistics, censoring
Kelly, J. P., data perturbation methods, 760–772
Statistics, correlation
Devroye, L., coupled samples, 114–126
Statistics, estimation
Kang, K., confidence-interval procedures, 546–555

T

Technology
Waks, N., decision making under uncertainty, 189–192
Transportation
Bertsimas, D. J., vehicle routing, 1019–1033
Gopalan, R., equity in route selection, 961–973
Klincewicz, J. G., use of consolidation terminals, 99–109
Papadakis, N. A., route selection and water transportation, 426–438
Transportation, mode/route choice
Benjamin, A. T., optimal maneuvering by turnpike theorems, 202–216

U

Utility/preference
Bordley, R. F., multiattribute utility theory, 815–819
Dyer, J. S., multiattribute, 386–396
Utility/preference, multiattribute
Soofi, E. S., sensitivity analysis of multiattribute models, 362–363